

ABSTRACT

A poly(trimethylene terephthalate) comprising 80% by weight or more of trimethylene terephthalate units based on the entire repeating units, having an intrinsic viscosity of from 0.4 to 1.5 dl/g, and satisfying the following formula (1):

(1)
$$[-OH] / ([-OH] + [-COOH] + [-CH_2CH=CH_2]) \times 100 \geq 40$$
 wherein $[-OH]$, $[-COOH]$ and $[-CH_2CH=CH_2]$ represent a terminal hydroxyl group content, a terminal carboxyl group content and a terminal allyl group content of the poly(trimethylene terephthalate), respectively. The poly(trimethylene terephthalate) can be produced by reacting terephthalic acid and/or its lower alcohol ester is reacted with 1,3-propanediol to form 1,3-propanediol ester of terephthalic acid and/or its oligomer, and then polycondensation reaction of the reactant is conducted at temperature of from 235 to 270°C while the above formula (1) is being satisfied to give the above poly(trimethylene terephthalate).